

B1  
To solve this problem, a method as disclosed in Japanese Patent Laid-Open Publication Serial No. HEI 5-301250 (i.e., Japanese Patent Application Serial No. HEI 4-108271) has been proposed. In this method, a square-shaped holding frame is protruded from a peripheral edge of the heating surface of the heating board so as to contact with the pattern-bearing film, and a concave portion is formed at the inside of the annular holding frame. When the pattern-bearing film is located to be opposed to the heating board in order to heat the film, the concave portion prevents the film from direct contact with the heating surface of the heating board. Thus, the concave portion restrains the marks or impressions of vacuum holes from being formed on the surface of the final molding so that the appearance of the molding is fortunately affected.

Page 3, replace the fifth full paragraph at lines 30 to 34 with:

B2  
A sixth object of the present invention is to provide an apparatus for forming a pattern onto an article during an injection molding thereof and an apparatus for the same, in which the pattern-bearing film can be cut by a simple structure and the cutting is low in cost.

Replace the paragraph bridging pages 9 and 10 with:

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Detailed Description of the Preferred Embodiments

B3  
FIG. 1 is a side view schematically showing the overall construction of an apparatus for forming a pattern onto an article during an injection molding thereof. A male mold 1 is fixed on a mounting board 3. The male mold 1 is opposed to a female mold 2. An injection nozzle 5 is arranged on the male mold 1 to communicate with an injection gate 4. The female mold 2 is fixed to a ram 7 through a movable board 6. With forward and backward traveling operation of the ram 7, the female mold 2 advances to and retreats from the male mold 1. In addition, the female mold 2 is provided with an air exhaust hole 8 through which air in the female mold 2 is exhausted to the outside by a vacuum pump (not shown in the figure). A fitting groove 1a in a shape of a rectangle is formed on a parting surface of the male mold 1, and another fitting groove 2b in a shape of a rectangle is formed on a parting surface of the female mold 2 so as to be opposed to the fitting groove 1a.

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Page 10, the second full paragraph at lines 28 to 31, replace with:

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A pattern-bearing film X is drawn from a roll R in a direction of an arrow shown in Fig. 1 by means of chuck devices 34 and 34 so that the film X is fed to a position opposed to the female mold 2, as described later.

Replace the paragraph bridging pages 10 and 11 with:

BS  
The heating board 9 has a stacked structure of a heating plate 10, a liner plate 11, a heater panel 12, and an insulation plate 13 which are stacked in this order. As described later, the heating plate 10 heats the pattern-bearing film X. A holding frame 14 in a shape of a rectangle is provided on the front surface of the heating plate 10. The heating board 9 is mounted to a support member 15 so as to be moved by solenoids 16. With the operation of the solenoids 16, the heating board 9 is moved in the direction perpendicular to the pattern-bearing film X. The solenoids 16 cause the heating board 9 to advance to and retreat from the female mold 2.

Replace the paragraph bridging pages 14 and 15 with:

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Next, as shown in Fig. 10, the heating board 9 at the standby position is moved to the front surface of the female mold 2.

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Thereafter, by the peripheral wall 14a of the holding frame 14 on the heating board 9, the pattern-bearing film X is pressed through the film suppressing frame 32. At this stage, the pattern-bearing film X is brought in contact with the peripheral wall 14a of the holding frame 14. Thus a closed heating space is defined, and the pattern-bearing film X is heated in a non-contact state. After the pattern-bearing film X is satisfactorily softened, as shown in FIG. 11, it is subjected to a vacuum suction through the air exhaust hole 8. When necessary, together with the vacuum suction, air may be blown toward the pattern-bearing film X through the air blowing hole 17. Thus, the pattern-bearing film X is caused to accord to the contour of the cavity surface 2a.

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Page 18, replace the second full paragraph at lines 21 to 32 with:

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137  
Now, with reference to Figs. 20 to 22, a third embodiment of the present invention will be described. Figs. 20 and 21 are sectional views of the apparatus taken along a lateral line, respectively. As shown in Figs. 20 to 22, two pairs of members 50 for holding heating board 9 are arranged along the both sides of the female mold 2 and the movable board 6 so as to advance thereto and retreat therefrom. Each holding member 50 is U-shaped, and a

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pair of holding members 50 have a pair of openings opposed to each other. Each holding member 50 is reciprocated through an operating rod 53 driven by driving device 52 such as an air cylinder.

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Replace the paragraph bridging pages 18 and 19 with:

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The pattern-bearing film X is fed so as to cover the entire parting surface of the female mold 2, and then, as shown in Fig. 20, the film suppressing frame 32 is pressed into the fitting groove 2b with the film X interposed therebetween, that is, the film X is fixed in the same state as shown in Fig. 8. In this state, the heating board 9 is advanced to the loading position opposed to the female mold 2, and the holding members 50 are located in an advanced position shown in Figs. 20 and 22. Thereafter, the heating board 9 is inserted into a space between a pair of holding members 50. In order to facilitate the insertion, a pair of holding members 50 should be located apart from each other so as to hold both ends of the heating board 9, and should have an internal distance so as to slidably accommodate the heating board 9.

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